

Subst. 9  
cont.  
B6 cont.

~~coarse wavelength division multiplexing the optical signals into subgroups of optical signals in corresponding subwindows within said operating window, each subwindow corresponding to a different group of channels within said operating window; and~~

fine wavelength division multiplexing the optical signals within a respective subgroup of optical signals into individual channels within in a corresponding subwindow.

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**REMARKS**

Applicant requests that the above amendments be entered, and that the application be reconsidered in view of these amendments and the following remarks. Claims 1-40 are pending in this application. Reconsideration of the outstanding rejections of claims 1-40 is respectfully requested in view of the following remarks.

Claims 1, 7-10, 14, 16, 20, 27, 29-30, 34-36 and 40 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by OTSUKA et al (U.S. Patent No. 5,841,557). Applicants respectfully traverse the rejections of these claims and submit that OTSUKA et al. does not anticipate the claimed inventions.

OTSUKA et al. discloses a system and method for scrambling the polarization of optical signals that have been combined, using wavelength division multiplexing, into combined optical signals. In a representative embodiment shown in FIG. 15, and described in column 19, line 30 through column 20, line 2, optical signals are transmitted via "signal light transmission sections" (e.g., 12N-1, 12W-(2i-1)) that are associated with optical channels (e.g., ch. 1(W), ch. 2i-1(W), etc.). Optical signals transmitted via the signal light transmission sections are combined in first "wave combiners" (e.g., 13-1, 13-2, 13-3, 13-4). The signals from the first wave combiners are further combined in second "wave combiners"

(e.g., 13-5, 13-6) and in a third "wave combiner" 13-7. The combined optical signal output from "wave combiner" 13-7 is input into a polarization scrambler 14W-1 before amplification by an amplifier 18W. Alternatively, in the event of the failure of amplifier 18W, the combined optical signal output from "wave combiner" 1-7 can be amplified by backup amplifier 18P (see column 19, lines 41-54).

OTSUKA et al., therefore, teaches the multiplexing of subgroups of optical signals carried over multiple channels into a combined optical signal that is amplified by a single amplifier (either 18W or 18P). OTSUKA et al., thus, merely discloses the amplification of an entire operating window of an optical communication system. OTSUKA et al. contains no teaching of the multiplexing of optical signals into subgroups associated with operating subwindows, where each optical line amplifier of a plurality of optical line amplifiers is configured "to amplify a subgroup of optical signals associated with a different subwindow" within an operating window, as recited in proposed claim 1. OTSUKA et al., therefore, cannot anticipate the invention of proposed claim 1. For at least these reasons, Applicants respectfully request entry of claim 1 and withdrawal of the rejection.

Proposed claims 14 and 27 recite features similar to those discussed above with respect to claim 1. Claims 14 and 27, therefore, patentably distinguish over OTSUKA et al. for at least the reasons set forth with respect to claim 1 above.

Claims 7-10 and 16 and 20 depend from independent claims 1 and 14, respectively. Applicants, therefore, respectfully request withdrawal of the rejections of these claims for at least the same reasons stated above with respect to claims 1 and 14.

With regard to claim 29, Applicants respectfully submit that OTSUKA et al. does not anticipate the features of this proposed claim. As discussed above, OTSUKA et al. merely

discloses "wave combining" units that multiplex optical signals associated with a plurality of channels into subgroups of combined optical signals. OTSUKA et al., thus, does not disclose the multiplexing of subgroups of optical signals "into individual channels within a corresponding window" as recited in claim 29. Applicants therefore respectfully request withdrawal of the rejection of claim 29.

Claims 30 and 34 depend from claim 29. Claims 30 and 34, therefore, patentably distinguish over OTSUKA et al. for at least the reasons set forth with respect to claim 29 above.

Claim 35 recites features similar to those discussed above with respect to claim 29. Claim 35, therefore, patentably distinguishes over OTSUKA et al. for at least the reasons set forth with respect to claim 29 above.

Claims 36 and 40 depend from claim 35. Claims 36 and 40, therefore, patentably distinguish over OTSUKA et al. for at least the reasons set forth with respect to claim 35 above.

Claims 2-6, 15, 17-19, 31-33 and 37-39 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over OTSUKA et al. in view of MELI et al. (U.S. Patent No. 5,946,117). The Office Action cites MELI et al. for allegedly disclosing various features of claims 2-6, 15, 17-19, 31-33 and 37-39 which depend, respectively, from claims 1, 14, 29 and 35. Applicants respectfully submit, however, that MELI et al. does not remedy the deficiencies of OTSUKA et al., discussed above with respect to claims 1, 14, 29 and 35. Applicants, therefore, respectfully request withdrawal of the rejections of claims 2-6, 15, 17-19, 31-33 and 37-39 for at least the reasons set forth above with respect to claims 1, 14, 29 and 35.

Claims 11 and 21-23 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over OTSUKA et al. in view of BAKER (U.S. Patent No. 5,452,124). The Office Action cites BAKER for allegedly disclosing various features of claims 11 and 21-23, which depend, respectively, from claims 1 and 14. Applicants respectfully submit, however, that BAKER does not remedy the deficiencies of OTSUKA et al., discussed above with respect to claims 1 and 14. Applicants, therefore, respectfully request withdrawal of the rejections of claims 11 and 21-23 for at least the reasons set forth above with respect to claims 1 and 14.

Claim 13 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over OTSUKA et al. in view of ONAKA et al. (U.S. Patent No. 5,886,804). The Office Action cites ONAKA et al. as allegedly disclosing optical line amplifiers that include dispersion compensating devices as recited in claim 13. Applicants respectfully submit, however, that ONAKA et al. does not remedy the deficiencies of OTSUKA et al., discussed above with respect to claim 1, from which claim 13 depends. Applicants, therefore, respectfully request withdrawal of the rejection of claim 13 for at least the reasons set forth above with respect to claim 1.

Claims 26 and 28 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over OTSUKA et al. in view of LITTLE et al. (U.S. Patent No. 5,430,568). The Office Action cites LITTLE et al. as allegedly disclosing various features of claims 26 and 28, which depend, respectively, from claims 14 and 27. Applicants respectfully submit, however, that LITTLE et al. does not remedy the deficiencies of OTSUKA et al., discussed above with respect to claims 14 and 27. Applicants, therefore, respectfully request

withdrawal of the rejections of claims 26 and 28 for at least the reasons set forth above with respect to claims 14 and 27.

Claims 12 and 24-25 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over OTSUKA et al. in view of LITTLE et al. and further in view of BAKER. The Office Action cites LITTLE et al. and BAKER as allegedly disclosing various features of claims 12 and 24-25, which depend, respectively, from claims 1 and 14. Applicants respectfully submit, however, that neither LITTLE et al. or BAKER remedies the deficiencies of OTSUKA et al., discussed above with respect to claims 1 and 14. Applicants, therefore, respectfully request withdrawal of the rejections of claims 12 and 24-25 for at least the reasons set forth above with respect to claims 1 and 14.

In view of the foregoing remarks, Applicants respectfully request that this amendment be entered. Applicants further request the Examiner's reconsideration and withdrawal of the outstanding rejections, and the timely allowance of this application. Applicants submit that the proposed amendments do not raise new issues or necessitate the undertaking of any additionally search of the art by the Examiner. Furthermore, Applicants submit that the entry of this amendment would place the application in better form for appeal in the event that the application is not allowed.

To the extent necessary, a petition for an extension of time under 37 CFR 1.136 is hereby made. Please change any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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